

What is claimed is:

1. A radiographic-image recording medium comprising:

a support which is transparent to radiation for use in recording, and resistant to shock;

5 a wavelength conversion layer which is formed under said support, and contains an organic binder and a fluorescent material which converts said radiation into a first electromagnetic wave for use in recording, where the first electromagnetic wave belongs to a first wavelength
10 band different from a second wavelength band to which the radiation belongs;

a first electrode layer which is formed under said wavelength conversion layer, and transparent to said first electromagnetic wave;

15 a recording-side photoconductive layer which is formed under said first electrode layer, and exhibits photoconductivity when the recording-side photoconductive layer is exposed to said first electromagnetic wave after the first electromagnetic wave has passed through said
20 first electrode layer;

a charge storage region which is formed under said recording-side photoconductive layer, and stores electric charges which are generated in said recording-side photoconductive layer in response to exposure to said
25 first electromagnetic wave;

a reading-side photoconductive layer which is

formed under said charge storage region, and exhibits photoconductivity when the reading-side photoconductive layer is exposed to a second electromagnetic wave for reading; and

5 a second electrode layer which is formed under said reading-side photoconductive layer, and transparent to said second electromagnetic wave.

2. A radiographic-image recording medium according to claim 1, further comprising a substrate which is
10 resistant to shock, and on which said second electrode layer, said reading-side photoconductive layer, said charge storage region, said recording-side photoconductive layer, said first electrode layer, said wavelength conversion layer, and said support are formed.

15 3. A radiographic-image recording medium according to claim 1, further comprising a substrate which is realized by a thin glass film, and on which said second electrode layer, said reading-side photoconductive layer, said charge storage region, said recording-side
20 photoconductive layer, said first electrode layer, said wavelength conversion layer, and said support are formed.

4. A radiographic-image recording medium according to claim 2, wherein said substrate and said support are made of materials having approximately identical thermal
25 expansion coefficients.

5. A radiographic-image recording medium according

to claim 3, wherein said substrate and said support are made of materials having approximately identical thermal expansion coefficients.

6. A radiographic-image recording medium according to claim 1, wherein said wavelength conversion layer and said first electrode layer are bonded together through a viscoelastic material which is transparent to said first electromagnetic wave.

7. A recording-medium unit comprising:

a radiographic-image recording medium;
a reading-light illumination unit which illuminates said radiographic-image recording medium with a first electromagnetic wave for reading; and

a portable casing which encloses said radiographic-image recording medium and said reading-light illumination unit, is transparent to radiation for use in recording, and shields the radiographic-image recording medium from said first electromagnetic wave and a second electromagnetic wave for use in recording; wherein

said radiographic-image recording medium includes,

a support which is transparent to said radiation, and resistant to shock,

a wavelength conversion layer which is formed under said support, and contains an organic binder and a fluorescent material which converts said radiation

into said second electromagnetic wave, where the second electromagnetic wave belongs to a first wavelength band different from a second wavelength band to which the radiation belongs,

5 a first electrode layer which is formed under said wavelength conversion layer, and transparent to said second electromagnetic wave,

 a recording-side photoconductive layer which is formed under said first electrode layer, and
10 exhibits photoconductivity when the recording-side photoconductive layer is exposed to said second electromagnetic wave after the second electromagnetic wave has passed through said first electrode layer,

 a charge storage region which is formed
15 under said recording-side photoconductive layer, and stores electric charges which are generated in said recording-side photoconductive layer in response to exposure to said second electromagnetic wave,

 a reading-side photoconductive layer
20 which is formed under said charge storage region, and exhibits photoconductivity when the reading-side photoconductive layer is exposed to said first electromagnetic wave, and

 a second electrode layer which is formed
25 under said reading-side photoconductive layer, and transparent to said first electromagnetic wave.

8. A recording-medium unit according to claim 7, further comprising a substrate which is resistant to shock, and on which said second electrode layer, said reading-side photoconductive layer, said charge storage region, said recording-side photoconductive layer, said first electrode layer, said wavelength conversion layer, and said support are formed.

9. A recording-medium unit according to claim 7, further comprising a substrate which is realized by a thin glass film, and on which said second electrode layer, said reading-side photoconductive layer, said charge storage region, said recording-side photoconductive layer, said first electrode layer, said wavelength conversion layer, and said support are formed.

10. A recording-medium unit according to claim 8, wherein said substrate and said support are made of materials having approximately identical thermal expansion coefficients.

11. A recording-medium unit according to claim 9, wherein said substrate and said support are made of materials having approximately identical thermal expansion coefficients.

12. A recording-medium unit according to claim 7, wherein said wavelength conversion layer and said first electrode layer are bonded together through a viscoelastic material which is transparent to said first

electromagnetic wave.

13. A radiographic-image recording medium comprising:

a support which is transparent to radiation
5 for use in recording, and resistant to shock;

a wavelength conversion layer which is formed
under said support, and contains an organic binder and a
fluorescent material which converts said radiation into an
electromagnetic wave for use in recording, where the
10 electromagnetic wave belongs to a first wavelength band
different from a second wavelength band to which the
radiation belongs; and

a photoelectric conversion layer which is
formed under said wavelength conversion layer, and
15 contains a substrate and at least one photoelectric
element which photoelectrically converts said
electromagnetic wave into at least one electric signal,
where the substrate includes a plate of a shock-resistant
material and a thin glass film formed on the plate, and
20 the at least one photoelectric element is arranged on the
thin glass film.

14. A radiographic-image recording medium according
to claim 13, wherein said plate and said support are made
of materials having approximately identical thermal
25 expansion coefficients.

15. A radiographic-image recording medium according

to claim 15, wherein said wavelength conversion layer and said photoelectric conversion layer are bonded together through a viscoelastic material which is transparent to said electromagnetic wave.

5 16. A radiographic-image recording medium comprising:

 a support which is transparent to radiation for use in recording; and resistant to shock;

 a wavelength conversion layer which is formed
10 under said support, and contains an organic binder and a fluorescent material which converts said radiation into an electromagnetic wave for use in recording, where the electromagnetic wave belongs to a first wavelength band different from a second wavelength band to which the
15 radiation belongs; and

 a photoelectric conversion layer which is formed under said wavelength conversion layer, and contains a substrate and at least one photoelectric element which photoelectrically converts said
20 electromagnetic wave into at least one electric signal, where the substrate is realized by a thin glass film, and the at least one photoelectric element is arranged on the substrate.

 17. A radiographic-image recording medium according
25 to claim 16, wherein said wavelength conversion layer and said photoelectric conversion layer are bonded together

through a viscoelastic material which is transparent to said electromagnetic wave.